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ABSTRACT

This discussion of how the effectiveness of federal student aid can be evaluated is framed in terms of three questions: (1) Has federal student aid expanded educational opportunity; that is, has it encouraged the enrollment and broadened the educational choices of disadvantaged students? (2) Has federal student aid made the distribution of higher education's benefits, and the sharing of its costs, fairer? (3) Has federal student aid made higher education institutions work better, by making them financially more secure and educationally more effective? Each question is discussed, followed by a brief conclusion pointing out the compatibility of the three points of view represented by the questions. Two tables summarize data on predicted distributions of enrollments in 1979 with and without the Basic Educational Opportunity Grant Program, and federal aid per freshman student across all institutions. The document contains 31 references. (KM)

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How Can We Tell if Federal Student Aid is Working?

Michael S. McPherson

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College Entrance Examination Board,
New York

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Foreword

Over the last two decades Washington has become a major partner in financing higher education, in large measure through student aid programs designed to promote educational opportunity. Since the mid-1960s the federal government has provided grants, loans, and work-study assistance to college students with financial need. In 1987–88 students will receive over $15 billion through generally-available federal programs (those that do not have special eligibility requirements such as military service).

As programs grow older and larger, it is natural to wonder whether they are achieving the purposes for which they were created. The question of what student aid programs have accomplished took on a special urgency in the 1980s, with Ronald Reagan's election to the White House. His views on federal spending reflected skepticism about the effectiveness of the "Great Society" social programs of the 1960s; and he set out to translate these views into major cutbacks in federal programs, including student aid. While many of the Reagan Administration's proposals for retrenchment proved unacceptable to Congress, they spurred vigorous debate about the extent to which the federal government should be involved in many areas of American life.

This political challenge sharpened interest in assessing what federal student aid had accomplished since its inception. A number of studies attempted to look at various aspects of this question, sometimes reaching contradictory and controversial conclusions. Part of the difficulty is that the question of whether student aid "works" is not a simple one; figuring out how to frame the issue is as important as research on the issue itself.

To help all who are concerned with student aid policy think more clearly about what aid programs are intended to do and about how to measure whether they do it, the College Board invited Professor Michael McPherson to write this essay. Dr. McPherson, who is chairman of the Economics Department at Williams College and who spent two years studying higher education as a Senior Fellow at the Brookings Institution, brings special talents to this task. He is a leading scholar of student aid policy and is widely respected for the conceptual clarity he brings to discussions of complicated issues.

As he says, this paper is not intended to answer the question, "How well is federal student aid working?" Rather, he and we hope readers will find that it helps them to ask and think about this important question more constructively. We hope, too, that it will serve as a spur to needed research and a benchmark against which to measure whether research tells us what we need to know about the accomplishments and shortcomings of federal student assistance.

Dr. McPherson wishes to express his thanks to Janet Hansen, Director for Policy Analysis in the Washington Office of the College Board, for suggesting the idea for this paper to him and for her quiet persistence in encouraging him to see it through. He also wishes to thank Joseph Cronin, Janet Hansen, Lee Hansen, Michael O'Keefe, and Gordon Winston for helpful comments on various drafts. As with all College Board policy studies, the views expressed are those of the author and do not represent an official position of the College Board.

Lawrence E. Gladieux
Executive Director

How Can We Tell if Federal Student Aid is Working?

That question has come, in various forms, to be a major preoccupation of legislators, administrators, and analysts concerned with higher education finance. Twenty years of large-scale federal support for student aid have resulted in a complex and interconnected set of programs. Some observers of the aid system see it as an essential underpinning of our existing college and university financing system that provides essential services to disadvantaged students and contributes to the financial health and stability of higher education as a whole. Others see it as a wasteful and ill-structured mess that spends money ineffectively and distorts the incentives of students and institutions.

How can we make progress in assessing the effectiveness of the aid system? No doubt we will always have both demagogic assaults on and apologetic defenses of federal aid programs, but most participants in the debate over the federal role in student finance want something more and better than that. They would like more agreement on standards of assessment of aid effectiveness, a more systematic grasp on the data, and, perhaps most important, a deeper understanding of the role aid actually plays in the overall working of the higher education system—an understanding of how it influences the choices made by students *and* the behavior of institutions.

Assessing the effectiveness of student aid requires a framework broad enough to capture the major issues at stake, but limited enough to provide a focus to investigation and judgment. We need to figure out what questions we have some hope of answering and we need to understand why some questions that *look* like they should have easy answers—how many students will drop out if we cut Pell grants?—are actually very hard. This paper does not propose to answer the question, "How well is federal student aid working?" but rather to help us ask it more constructively.

That basic question can be interpreted quite broadly or very narrowly. The narrowest formulation is: "Does federal aid money go where the statutes and regulations say it should go?" This question has been pursued in a number of "quality control" studies undertaken by the Department of Education. The aim is not to learn whether aid accomplishes its purposes, but simply whether the administrative machinery works. At the other extreme, a highly ambitious formulation would be, "Does federal student aid make the U.S. a happier and more productive society?" This must in some sense be the ultimate purpose of student aid; it is a dauntingly difficult question to answer, or even approach, however, for several reasons. Not only are the terms "happier" and "more productive" uncomfortably vague, but the question also calls for a comprehensive understanding of the role of higher education in American society as one part of its answer.

Both the narrower and broader questions are worth asking in certain contexts. For our purposes though, we want something broader than the "quality control" issue and narrower than the "quality of life" issue. We should look beyond the former because the quality control studies seem to show that the shortcomings in the student aid delivery system are not so dramatic that they defeat the main intents of the system and, moreover, they are not beyond improvement. At the same time, before we can reach a judgment about the "cosmic" questions, we need answers to some intermediate ones. We cannot judge how aid policies affect the quality of American life until we know what impact they have on schools and students. This then is a good place to start.

The discussion will be built around several questions of the "middle range"[1] that ask whether student aid has achieved (is achieving) its broad social purposes. Consider three issues, framed as historical questions about the impact of the aid policies of the last twenty years:

1. Has federal student aid expanded educational opportunity? Has it, that is, encouraged the enrollment and broadened the educational choices of disadvantaged students?

[1] See the partly related use of this notion in Merton, 1968.

2. Has federal student aid made the distribution of higher education's benefits, and the sharing of its costs, fairer?
3. Has federal student aid made higher education institutions work better, by making them financially more secure and educationally more effective?

This agenda of questions is broader than the one that has become most common in discussions of aid effectiveness. We have fallen into the habit of equating the issue of aid effectiveness with measures of the effect of student aid on the enrollments of low-income students. This is natural, because, as our first question suggests, helping deprived students is obviously a central purpose of the aid effort and because it at least looks somewhat measurable. But limiting inquiry to that first question produces an unreasonably narrow framework for assessing the role and impact of student aid. It is worth taking a moment to elaborate that point.

Take first the question of fairness, a term most social scientists would be happy to avoid, if they could. Is it correct to say that our concern with the fairness of the aid system is captured in finding out if aid allows poor students to get to college who otherwise could not? This would allow us to limit discussion to our first, and most comfortable, question. But I think it is clear that a lot of the energy in the student aid debate comes from questions about who *should*, and not simply who *can*, carry the burden. Once a system that helps some families is put in place, one needs systematic rules about where to draw lines determining whom to help and in what amounts. Those concerns have, for example, been at the heart of the continuing wrangle over how far up the income scale subsidies should extend.

Even when we consider only poor families, our concerns about aid are not exhausted by the aim to get more of their members into higher education. Some low-income families, no doubt, have made extraordinary sacrifices to send their children to college without aid. Most people, I believe, would feel strongly that it is unfair to ask that kind of sacrifice of some parents while others have a much easier time of it. Surely this kind of judgment should figure in our assessment of the aid system. This is so even though for such families—ones who would actually make the extraordinary sacrifice if not helped—student aid just improves the family living standard and does not increase enrollment.

The impact of aid on institutions and on the financial stability of higher education similarly must be in the picture. Although we pin the label "student aid" on some of the dollars the federal government disburses, the fact is that those dollars inevitably become part of the stream of financial resources on which colleges and universities rely. In the immortal words of David Stockman, those aid dollars help colleges and universities "finance their budgets."[2] It is quite likely that federal aid policies affect college pricing and aid policies, admissions policies, curricular and staffing decisions and so on. Aid, that is, affects the *supply* as well as the *demand* for education. Moreover, the history of the federal student aid programs makes it fairly clear that Congress anticipated and implicitly endorsed the notion that federal aid would contribute to the financial health of colleges.[3] These impacts must be part of our story.

1. Student aid and educational opportunity

Although, as we have just observed, there is more to the story, a central purpose of federal student aid has undoubtedly been to provide needy students with more resources in order to encourage them to attend college as well as to broaden their choice among colleges. How well has that strategy worked?

Attempts to answer this question come up against one preeminent obstacle: need-based federal student aid is only one strand in a highly complex and varying web of factors that determine students' educational decisions. It would be most convenient if we could "rewind the tape" of the last twenty years, and see what higher education would look like if we had never had, say, Pell grants, but everything else had been unchanged. Or—a subtler question—if we could see what would have happened had Pell grants been fully funded and the Pell formula for determining grant awards been left untouched over the period.

But that is impossible, and we are left with basically two kinds of substitutes for replaying history. One, what I will call "before and after" study, involves looking at the actual historical record to try to see how the world with federal student

[2]"Now you are going to get a lot of pressure from the colleges on it. They're not worried about the student, they're not worried about equity in America; they're worried about financing their budgets." David A. Stockman, quoted in *The New York Times*, February 8, 1985, page 1.

[3]See the illuminating treatment in Gladieux and Wolanin, 1976.

aid is different from the world without it. The trouble, of course, is that we can never be sure if the results that show up in the actual record were produced by factors other than or additional to student aid—precisely the sort of possibility we could rule out if we had the power to replay history with just the changes we wanted to examine.

The alternative is to build a statistical model of the processes that generate the historical outcomes, estimate the parameters of that model, and try to "simulate" the replaying of history through the model, by running the model with and without some variety of federal aid. The danger here—besides all the pitfalls of statistical estimation—is that of omitting from our model some of the key relationships that shape "real-world" change. Suppose, for example, that federal student aid has indirect effects on the behavior of institutions—maybe more generous aid makes them raise their admissions standards. The actual historical record will be shaped by these indirect effects, but the simulated history will not.

Since neither approach is adequate in itself, the obvious thing to do is to try both approaches and see if the two sets of findings can be reconciled. It is not my aim to *do* that job here.[4] What I will try to do is sketch out what the "raw material" for that job would look like—that is, what in broad terms the historical record and existing statistical studies seem to tell us—and what the task of reconciling them is like. It will be convenient to focus discussion on the Pell grant program, introduced through the Higher Education Amendments of 1972 (and called Basic Educational Opportunity Grants until 1980), and generally regarded as the flagship of the national effort to expand educational opportunity.

Statistical studies. Almost all statistical studies of the effect of student aid on enrollment try to get at the problem from the demand side: aid, in the form of grants or subsidized loans,[5] "buys down" the student's or family's cost of college and thereby encourages enrollment demand or the choice of more costly schools. The majority of demand studies in fact estimate the influence of price changes on enrollment behavior; to decide what these studies imply about aid effects requires a judgment about whether a dollar of grant aid or a dollar's worth of loan subsidy is more, less, or equally as effective as a one dollar price cut in stimulating enrollment.

Available studies differ widely in data sources, statistical methods, and findings.[6] They do, however, tend to agree on two main points: student decisions to enroll in college respond positively, and nontrivially, to price cuts; and decisions about where to attend school also respond nontrivially, and in the expected way, to changes in relative prices of alternative schools. Those studies that have been able to look separately at the effect of aid awards on enrollment decisions find similar things: both grants and loans stimulate enrollments, with (as we would expect) a dollar of grants having more effect than a dollar of subsidized loans (which is less than a dollar of loan subsidy).

Rather than attempting yet another survey of this large and somewhat technical literature, let me make these findings more concrete by focusing on one exemplary study, that done by Charles Manski and David Wise several years ago (Manski and Wise, 1983).

Manski and Wise examined data for a sample of 1972 high school graduates. They estimated a statistical model that best explained the choices these young people made among schooling and nonschooling alternatives, on the basis of the characteristics of the students (family income, parental education and the like) and of their post-high school alternatives (prices and aid offers from colleges they were eligible for, employment opportunities, and so on). A number of their main results confirmed findings of other studies—for example, that the enrollment choices of low-income families are more sensitive to price than those of higher income families and that enrollments are more sensitive to price at two-year than at four-year colleges.

Manski and Wise then used their model explicitly to attempt the kind of exercise described above: they tried to simulate with their model the effect of the Pell grant program on 1979 enroll-

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[4]Leslie and Brinkman, 1988, survey both historical and statistical studies of enrollment effects of student aid in Chapter 8.

[5]"Work study" or subsidized work raises other complications. If the student is paid more than she could get without the subsidy, the difference might be viewed as being like a grant. If not, the subsidy really goes to the employer. Things get even more complicated if the issue turns on job availability rather than pay rates. The federal college work study program has, in fact, been a rather small component of the overall federal aid effort, and for simplicity I will leave it aside here and concentrate on loans and grants.

[6]A number of able reviews of the literature on demand for higher education exist. A recent one, which provides references to many of its predecessors, is Leslie and Brinkman, 1987.

Table 1

Predicted Distributions of Enrollments in 1979 With and Without the BEOG Program[a]

	Predicted enrollments							
	All schools (1)		4-year schools (2)		2-year schools (3)		Voc-Tech schools (4)	
Income Group	With BEOGs	Without BEOGs	With BEOGs	Without BEOGs	With BEOGs	Without BEOGs	With BEOGs	Without BEOGs
Lower (less than $16,900)	590	370	128	137	349	210	113	23
Middle	398	354	162	164	202	168	34	22
Upper (more than $21,700)	615	600	377	378	210	198	28	24
Total	1,603	1,324	668	679	761	576	174	69

[a]Numbers are in thousands of students.
Source: Manski and Wise (1983).

ments. They did this by estimating their model with and without the Pell program, holding all other variables constant. The results, summarized in Table 1, suggest that Pell grants "should" have had (if their model is correct) a significant positive impact on enrollments, especially of low-income students. The enrollment effects, given the parameters of their model, are much larger at two-year than at four-year colleges, and much larger among low-income than among higher income grant recipients.

These latter results are worth underlining, because they imply that the enrollment impact of federal grants is very sensitive to how the grants are distributed. In 1979, the year Manski and Wise simulated, the Pell program was much more generous toward middle- and upper-income students than it was earlier, or than it is now. Manski and Wise estimated that just under half of all Pell awards in 1979 would go to low-income students (by their definition) compared to 86% targeted on that group in 1977. If lower income students are more responsive to aid awards, this change in targeting tends greatly to dilute the enrollment impact of the program. Thus, Manski and Wise estimate that in 1977, 39% of Pell awards went to "induced enrollees"—students who would not attend without the award. This figure dropped to 25% in 1979.

The Manski and Wise results are not out of line with most other econometric estimates of price responsiveness of enrollment demand. They estimate that the 1979 Pell program raised enrollments by 21% compared to a world without Pell. A "consensus" estimate of demand elasticity arrived at by Leslie and Brinkman (1987) on the basis of their extensive literature survey would put that figure modestly lower, at something more like 10 to 15%.[7] There is also some reason to believe that the Manski-Wise estimate of enrollment responsiveness at two-year colleges is too high, and at four-year colleges too low.[8] The finding that lower income families are more price sensitive than others has been confirmed in a number of other studies.[9] In all, the Manski and Wise effort fairly represents the state of the art in the econometric study of higher education demand.

The historical record. Simulation results are inevitably a kind of fiction, an attempt to answer the question, "What if?" We would naturally like to know if historical experience confirms the simplified picture of reality captured in the statistical models. Has the presence of the Pell program actually produced the results the simulations suggest?

A first look at the overall pattern of enrollments during the period Pell was expanding consistently—roughly 1974 through 1980—suggests a mixed answer to this question. Some features of the period confirm the econometric expectations rather nicely. Two-year college and vocational-technical school enrollments grew more rapidly than four-year college enrollments over the period, as we would expect if grants to low-income

[7]A fuller treatment of the Manski and Wise work and details of the estimation procedure used in obtaining the "consensus" estimate reported in the text are in McPherson, 1988.

[8]For discussion of these points, see McPherson, 1988.

[9]See McPherson, 1978, for a review of evidence on this point.

students were a primary stimulus to enrollment. (Manski and Wise estimate that 60% of 1979 vocational-technical school enrollments were generated by Pell grants.) College participation rates of black high school graduates and of low-income high school graduates grew modestly over that period, as we should also expect.

On the other hand, because Pell grants reduce the price to low-income students compared to that facing high-income students, we should expect Pell grants to increase the relative participation of students from lower income families in college—that is, participation rates of lower income students should grow faster than others. And this, as Hansen (1984) has argued, we do not find.[10] In fact, enrollments of families with above average and below average incomes grew at about the same pace from the early to the late 1970's—and this is true of men, of women, of blacks, and of whites. Hansen has suggested that this implies that the enrollment trends were dominated by factors common to both richer and poorer families (the women's movement as an encouragement to female enrollment is an example) and that grants to lower income students did not have much effect.

Unfortunately, neither the supportive nor the skeptical observations just reported can carry very much weight in deciding how effective aid is. The rapid expansion in community college enrollments in the 1970's was at least in part the product of a tremendous effort by states to increase the supply of such places. We do not know to what extent potential students in an earlier time would have attended community colleges, located close to home and with open admissions policies, even without federal grant support, because in many areas those schools didn't exist.[11] And, of course, that supply effect can help account for increasing participation of disadvantaged students without necessarily looking to aid for the explanation.[12] (But would states have built and sustained those schools without the promise of federal aid? That subtler question about the supply side effects of federal aid arises in section 3 below.)

What about the failure of low-income enrollment gains to outpace those of other groups? This evidence is weak because it ignores the possibility that other factors at work in the 1970's were differentially boosting the enrollment of upper income groups, or retarding lower income enrollments. To the degree that is so, the conclusion should be, not that Pell grants had no effect, but that in the absence of Pell grants, lower income enrollments would have fallen compared to others.

The 1970's were a complicated decade. The Vietnam war strongly influenced the choices of young people in the early years of the decade; inflation and poor real performance of the economy may have affected judgments about the affordability of and the returns to higher education later in the decade; throughout the decade, the baby boom college classes of the 1960's and early 1970's flooded markets for educated labor and reduced the job prospects of college graduates (Freeman, 1976). The relative impact of these factors on students from richer and poorer families is not well understood.

One obvious, and ironic, factor tending to promote expansion in upper income enrollments was the growth of federally supported financial aid to upper income students. In 1978, Congress passed and the President signed the Middle Income Student Assistance Act (MISAA), which (as already noted) greatly increased the proportion of Pell dollars going to families with incomes above the median and also made subsidized, federally guaranteed student loans available to all students, without regard to financial need. This legislation resulted in a dramatic redistribution of federal financial aid in the space of a year or two.

Some sense of the magnitude of the shift can be gleaned from Table 2, which reports on federal aid

[10]Hansen's piece has stimulated much controversy. It has been argued that his results may be sensitive to choices of definition of income bands, to choice of starting and ending years, to details of enrollment definitions, and the like. See Lee, 1982, Lee, 1986, and Frances, 1982. Although there are important limitations to Hansen's study, I do not believe these further studies have succeeded in overthrowing Hansen's main findings for the period in question. The proper implications to be drawn from those findings are, as I argue in the text, another matter.

[11]Much of the increase in supply of community colleges predates the introduction of basic grants in the early 1970's, with almost 400 such institutions constructed during the years 1963–1973 (Center for Statistics, 1986, p. 121). There is, in fact, evidence that the income distribution of college enrollments shifted in favor of lower income families during the late 1960's (Davis and Johns, 1982). Some of the enrollment effects of this supply increase would likely carry over into the 1970's. It is also true that community college construction continued to be relatively rapid in the late 1970's, with 109 such institutions opening between 1973 and 1981.

[12]It is harder to see a comparable supply-side push on proprietary education, and in my view the rapid growth of the proprietary sector in the 1970's is the clearest evidence of the enrollment impact of aid. But the proprietary sector, although growing rapidly, was still relatively small at the end of the 1970's.

Table 2

Federal Aid Per Student, All Institutions, Freshmen

Income			Year					
			1974	1976	1978	1980	1982	1984
$10K or less		Real Pell	565.07	731.75	736.82	590.90	443.76	426.80
		Real Federal Loans	346.11	300.62	328.06	396.74	528.31	597.05
		Real Value of Federal Aid	869.00	1,021.37	1,025.00	922.17	792.63	807.46
$10K to $20K		Real Pell	166.70	246.77	230.64	267.37	172.35	149.14
		Real Federal Loans	358.69	332.80	417.48	572.19	564.16	633.69
		Real Value of Federal Aid	384.57	478.88	502.37	620.76	497.51	510.59
$20K to $30K		Real Pell	58.45	76.47	60.56	95.16	54.23	32.66
		Real Federal Loans	241.09	245.58	358.31	581.73	393.21	446.67
		Real Value of Federal Aid	187.93	218.80	261.09	411.31	266.86	272.28
$30K to $50K		Real Pell	43.24	33.74	28.46	42.72	27.35	12.51
		Real Federal Loans	179.19	113.91	174.16	513.45	224.97	246.75
		Real Value of Federal Aid	139.64	95.23	123.06	308.47	146.68	141.25
$50K or more		Real Pell	15.29	15.27	12.76	17.27	17.50	8.10
		Real Federal Loans	74.79	39.06	54.77	407.59	119.44	142.21
		Real Value of Federal Aid	55.89	37.54	42.99	224.73	80.55	82.30
ALL		Real Pell	162.02	202.28	186.03	217.37	144.21	132.66
		Real Federal Loans	282.88	234.55	306.05	520.70	410.62	465.25
		Real Value of Federal Aid	339.89	364.96	381.42	529.90	381.94	398.78

Source: Calculated from CIRP, American Freshman Survey. Amounts and incomes in 1978 dollars. Real value of federal aid is sum of Pell, SEOG, and one half of federal loans. Data are for full-time freshmen resident students. Both recipients and non-recipients of aid are in the population base.

dollars per full-time freshman resident student for several years during the period 1975–1984. (The dollars are averaged over recipients and nonrecipients of aid and are expressed in real terms.) The table reports Pell grant dollars per student, federal loan dollars per student, and an estimate of the "value" of aid per student, with federal loan dollars being valued at half the loan amount, for students grouped by family income.[13] Income is measured in dollars of constant (1978) value.[14]

Comparing 1976 to 1980, we see that MISAA significantly increased federal subsidies to students from more affluent families.[15] While the value of per-student subsidies to the poorest students stayed about constant in real terms, those to families with incomes between $10,000 and $20,000 increased by more than a third. Percentage increases were still higher for families with higher incomes than that, although in absolute dollars the amounts remained fairly small. This redistribution resulted partly from an easing of the income restrictions on Pell, which benefited moderate-income students especially, and partly from the "uncapping" of Guaranteed Student Loans (GSL), which made significant amounts of federal subsidy dollars available to very high income students. The implied redistribution of federal subsidy dollars is quite substantial. Between 1976 and 1980, federal student aid subsidies to freshman resident students with real family incomes below $10,000 fell by about $100 per student in real terms; for students in every higher income group (including those from families earning more than $50,000 per year) such subsidies increased by about $200 per student.

If the 1970's provide only ambiguous evidence on the effects of expanding the federal student aid commitment, the 1980's may shed more light on the impact of aid cutbacks. Although Congress has strongly resisted the sharp reductions in federal student aid repeatedly proposed by the Reagan administration, Congress has, especially in the early 1980's, permitted erosion in the real value of appropriations in some aid programs.[16] At the same time, in an environment of limited total aid funding, the increasing flow of aid funds to students at proprietary institutions and to adult students has implied reductions in the real value of aid available to the "traditional" college population—young people attending state-run and nonprofit postsecondary schools full time. Data from the American Freshman Survey indicate that Pell grants for the lowest income students (family incomes of $10,000 and below in 1978 dollars) have fallen by 30 to 50% (depending on type and control of institution) on an inflation-adjusted, per-student basis for full-time resident students between 1979 and 1984. Some of this drop has been made up by expanded use of student loans, but the total amount of federal subsidy going to these students has clearly fallen substantially.

We have had, then, something approaching a "natural experiment" in the impact of cutting student subsidies since 1980. Of course, like the aid expansion of the 1970's, the "experiment" has hardly been conducted with scientific purity. Aid to upper income students was cut back almost as

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[13]The major subsidy elements in federally guaranteed loans are the payment by the federal government of all interest while the student is in school and the payment of a fee by the federal government to the lending institution that reflects the difference between the student's interest rate and a market rate of return while the loan is being repaid. Subsidies in the National Direct Student Loan Program take a different form, but are similar in magnitude. Estimates that put the subsidy value in the vicinity of 50% can be found in Hauptman, 1982, and in Bosworth and others, 1987.

[14]The data set relied on here has well-known limitations. All values are self-reported estimates by college freshmen, who may not be well informed either about their parents' income, or even about the amount and, more especially, the form of the aid they receive. The bulk of the sample of schools from which the data are drawn are schools that have elected to participate—it is not a statistically controlled sample. (Within a school, however, the data are not used unless most freshmen take the survey.) Finally, the questionnaires are not issued under controlled conditions. For all these reasons, these data must be interpreted cautiously.

There are, however, three good reasons for relying on these data. First, in examining trends over time, some sources of error are likely to be consistent over years—it is plausible, in particular, that in any year freshmen are likely to misestimate their parents' income in a similar way. Second, gross movements in the data—for example, the runup in federal loans to affluent students after MISAA—show up in a reassuring way. Finally, these data have the cardinal virtue of existing, in a consistent format, over a period of years. They are the only national data on student aid that have that property.

[15]These changes are relevant to the comparisons Hansen makes, since he focused on comparing 1972 to the years 1979 and 1980, the two years when MISAA had its largest influence.

[16]The most dramatic step was the decision in 1981 to eliminate the provision of benefits to social security recipients' children while they were in college. (Before this change, benefits ended at age 18 for nonattendees, but continued to age 21 for those who enrolled in college). The higher education community expected that the savings from eliminating this arrangement would be plowed back into need-based student aid programs; this never happened.

sharply after 1980 as it was increased in the two preceding years. Real college tuitions starting rising rapidly at about the same time aid started to decline. The turmoil surrounding proposed aid cutbacks also complicates the picture: at various points in the 1980's headlines may have made potential students believe that aid prospects were much more dismal than they really were. These beliefs may have had real impacts on enrollment decisions.

We have not yet had systematic studies of trends in enrollment patterns in the 1980's comparable to those done for the 1970's. Fragmentary evidence, however, suggests that the aid reductions may have had a significant impact on enrollments of lower income students. This may be part of the explanation for the decline in black enrollments that has been receiving considerable attention. Black students come disproportionately from families that are eligible for need-based student aid, and evidence from the freshman data suggests that this group has shared in the general decline in federal aid subsidies. Arbeiter (1986) has shown that the enrollment rate of young blacks in traditional higher education has dropped substantially in the 1980's. He argues that part but probably not most of the drop may be accounted for by increased black enrollment in proprietary vocational-technical schools (on which we do not have good enrollment information).[17]

Other fragments of evidence of the impact of aid include widespread suggestions—and some statistical corroboration—that public university students are more affluent than earlier, an indication of shifts from full-time to part-time enrollment, and the weak enrollment performance of public community colleges, which tend to enroll a lower income clientele.

The missing part of the picture for the 1980's is systematic study of enrollment trends by income class of students—work for the 1980's comparable to that done by Hansen and by others for the 1970's. Even with such studies, of course, the usual cautions about drawing causal inferences from historical trends will need to be invoked. But clearly we need to know more about these trends. If the evidence of the 1970's suggests that expanding educational opportunity through student aid is a tough uphill climb, the fragmentary evidence of the 1980's seems to indicate that rolling down the hill is much easier.

2. Fairness

Judgments about the fairness of the U. S. higher education system turn mainly on some of its key structural features that are largely independent of the federal role. The U.S. sends significantly more of its young people on to postsecondary education than most other countries do, and asks them (or their parents) to pay more of the costs than most other countries do—two features that are almost certainly related. The U.S. is also highly unusual in maintaining a mixed system of state-run and private institutions, with the former basing relatively low tuitions on substantial state operating subsidies, and the latter depending for financing more on tuition and private philanthropy.[18]

The federal student aid effort has not challenged these structural features directly and has set up only rather mild incentives for changing them indirectly.[19] It has instead worked essentially within the existing structures and helped mainly but by no means exclusively with financing the education of lower income students. In fact, as will be explained further below, even within the more limited context of student financial aid, the federal government has tended to work within a larger structure of "need-based student assistance" that in its main principles predates the federal effort.

Inevitably in these circumstances, judgments about the fairness of the federal student aid effort get tied up with larger questions about the fairness of the overall system of higher education financing in the United States. In deliberating about fairness, then, there is room both for large-scale discussion about the fairness of the overall institutional structure, as well as for more limited inquiry into the fairness of the federal effort given

[17]This too may be partly the result of changing federal student aid patterns—with reduced federal subsidies covering more of the costs of a short-term vocational program than of traditional higher education.

[18]Johnstone, 1986, provides a highly illuminating study of college financing practices in several European countries.

[19]The State Student Aid Incentive Grant Program was designed deliberately to encourage states to put resources into student aid; a possible by-product might have been fewer resources for direct subsidies of public institutions and so higher tuitions. This is about as close as the federal government has come to trying explicitly to shape state higher education financing policies.

that larger institutional context.[20] Here will stress mainly that second, more modest level: within the mixed system of public and private colleges in the U. S., does federal student aid make the distribution of benefits and burdens in U.S. higher education fairer than it otherwise would be?

Even after limiting the discussion in this way, it is helpful to divide it into two parts. We will look first at "macro-fairness"—at the implications of federal student aid for the distribution of the burden of higher education finance among income groups in the population and between public and private sectors in higher education. The issue of "micro-fairness"—the details of how awards to individuals are determined—will be looked at in turn.

Macro-fairness. The key institutional feature of U.S. higher education that shapes deliberation about macro-fairness is the provision of higher education on a large scale by both state-run and independent, nonprofit institutions. Regarding public higher education, does the low-tuition strategy do enough to relieve the financing burdens of those less affluent families who attend there? And, on the private side, do considerations of fairness argue in favor of federal efforts to help bridge the gap between tuitions in the public and private sectors (a gap that is the product more of state subsidies than of cost differences between the sectors)? These questions correspond more or less to the trite labels of "access" and "choice."

It is important in getting a handle on these questions to get a sense of what the federal aid system, as it has evolved over the last twenty years, actually does in these respects. The basic logic of the federal role has been heavily shaped by the principles of "need-based" student aid, originally worked out by a group of colleges in the 1950's to guide the allocation of their own student aid resources. These principles, in fact, when fully fleshed out, amount to a rather comprehensive view—indeed, an ideology (a term I mean not at all negatively)—of student finance.[21]

The key principles of the need-based aid ideology are these:

1. The first responsibility for paying for postsecondary education lies with the student and his or her parents.
2. The ability of a family to meet those responsibilities should be measured through a thorough, explicit, and objective assessment of its financial capacity.
3. Financial aid should be awarded only to students who can demonstrate need for it as measured by family ability to pay.
4. A student's ability to pay should influence his or her choice of college less as increased aid resources are available. Ideally, if resources permit, cost of college should be eliminated as a factor in college choice for students with demonstrated need. That is, aid should be sufficient that a family's expected contribution to college cost is independent of what school the student attends.

It is worth pausing a moment to note how widely accepted these principles are in higher education—both by the colleges and by the American public—and how thoroughly unique they are, within American society, to higher education. Nobody suggests that one's choice of cars or houses or food should be independent of one's capacity to pay. Medical care is perhaps the only other example in America of a marketed commodity in which we try to sever the link between capacity to pay and quality of service received.[22] And not even for medical care are families of average or above average means asked to bare their financial souls as they do, rather readily, for colleges. Plainly, the willingness of schools to ask for and parents to comply with this degree of financial probing is based squarely on a perception that access to college is so important in our society that this way of doing business is fundamentally fair.

This is not to say, I hasten to add, that colleges ever have lived up to this ideology fully, or indeed that the ideology is itself unproblematic. At the

[20]The best recent discussion of the fairness of the overall U.S. system for distributing higher education resources appears in Gutmann, 1987. John Lee, 1987, provides an eye-opening account of the total amount of subsidy received by students of differing incomes at various types of institutions.

[21]By calling the principles of need-based aid an "ideology," I mean only to stress their comprehensiveness and principled basis, as well as to suggest some of the fervor with which members of the aid community are attached to them. I do not in any way mean to imply that the doctrine is stupid, shallow, insincerely held, or politically partisan—none of which is true.

[22]The link between health and education here is no accident. Indeed, public provision of elementary and secondary education reflects in part a similar desire to reduce the effects of family ability to pay on quality of services received. These two "commodities," health and education, are widely seen as basic determinants of social opportunity—"basic goods" in Rawls' sense of goods that we need in a society like ours to pursue almost any reasonable plan of life. See Rawls, 1971, and Daniels, 1985.

level of practice, almost all colleges and universities give at least some aid based on merit (athletic, academic, or other) unrelated to need, and very few have provided enough aid to all qualified needy applicants to eliminate costs as a factor in college choice. At the level of principle, the notion of family or parental responsibility applies awkwardly to adult students and to young people whose parents just refuse to act "responsibly" (as that term is understood in the needs ideology). The challenge of measuring ability to pay raises all sorts of problems, some rather technical (dealings, for example, with tax shelters), some more principled (taking account of families' longer run capacity to save and borrow in assessing their ability to pay).

Indeed, some observers would reject the need-based aid ideology altogether, arguing that parental resources should be ignored. Leaving parental resources out of the picture might imply large amounts of subsidy to all students, on the grounds that they are all, on their own hook, "needy." A different way of taking parental resources out of the picture is to argue that students, as prime beneficiaries, should pay for their educations themselves through long-term unsubsidized loans. Accepting either of these positions would imply a radical revision in our thinking about how to pay for college. These are, for the moment, distinctly minority views. The predominant position in America has been that substantial amounts of need-based aid are needed to compensate for differences in family background that would otherwise distribute the burdens and benefits of higher education quite unfairly.

A look at the historical record shows that federal aid policy has been powerfully shaped by the "needs" ideology. Indeed, among the "generally available" student aid programs, only the Guaranteed Student Loan Program has fallen outside the "needs-based aid" framework—and even that, as we shall see below, is changing.

The first general purpose federal student aid grant program, inaugurated in 1965, worked explicitly through the needs analysis systems the colleges had developed on their own. Money was provided through Educational Opportunity Grants (as well as through College-Work Study) for colleges to distribute through their financial aid offices to students whom they judged "exceptionally needy." Later National Defense (renamed Direct) Student Loan funds were folded under the same framework.

When the federal effort expanded with the introduction of Basic Educational Opportunity Grants (later Pell grants) following the 1972 Education Amendments, a federal formula dictated the grant distribution. (Campus-based grants were preserved and renamed Supplementary Educational Opportunity Grants.) The formula was similar in structure to the needs analysis methodologies then in place, making award amounts depend on families' financial condition and cost of college. Thus, although college financial aid offices had no discretion over these funds, their distribution was shaped by needs analysis principles.

Two critical features of the BEOG method of award determination shaped the distribution of awards. First, a ceiling was set on the award any one student could get, a ceiling determined by the family's ability to pay (and more fundamentally by the limits on what Congress was willing to spend on the program). Going to a higher cost college would not permit a student to get more than this ceiling amount, although going to a low enough cost college could reduce a student's need, and so her award, below that ceiling. In principle, a big enough maximum grant would make awards under the program highly sensitive to tuition levels—students at low-tuition schools would cease to have need at award levels lower than those available to students with the same family income at more expensive schools. In practice, the "ability to pay" ceiling has been the binding constraint for most students most of the time (that is to say, very few students have had their full need met by Pell aid, given the funding limits), so that award amounts in the Pell or BEOG programs have not been very sensitive to tuition levels.

The other feature was a rule that no student could receive a BEOG award amounting to more than half of his total educational cost (more recently changed to 60%). Private colleges have supported this provision as a way of limiting the flow of aid dollars to public institutions with low tuitions. This constraint, which does not at all follow from the logic of the "needs" ideology, has been binding mainly for the lowest income students at low-tuition community colleges.

These programs—the basic grant or Pell program and the "campus-based" programs, such as SEOG, C-W S, and NDSL—fit quite comfortably within the larger framework of need-based student aid created by the nation's colleges and universities. In fact, it is helpful to see these programs essentially as a federal effort to fund part of the colleges' need-based aid strategy. (Many state student aid programs can be viewed in the same

light.) Federal regulations prohibit students from receiving more support from these programs combined than the amount he or she would be determined to "need" by the needs analysis methodologies schools use, and indeed for the most part (especially at private institutions) federal resources provide only part of the aid funds needy students receive.[23]

What part of need has the federal government been willing to fund? It is in addressing this question that we begin to gain some insight into the treatment of "access" and "choice" or of public and private schools by the federal need-based aid programs. Most state-run schools have low tuition and offer relatively little aid from their own resources (state support goes predominantly for operating subsidies that support the low tuition). Low tuition implies that federal need-based aid has to go to students from families of low or modest incomes (others will not have need), and the paucity of institution-based funds means that for most such students the bulk of their aid comes from the federal government. Thus, in public higher education, federal need-based aid acts in effect as a *supplement* to the low-tuition strategy in keeping down the costs facing low-income families. The fairness of that supplementary aid has to be viewed in the context of state policies that already provide very substantial subsidies (through low tuition) to all attendees regardless of income. The federal aid introduces an element of income sensitivity into what is otherwise a fairly regressive pattern of subsidy in public higher education.[24]

The situation in private higher education is quite different. Private institutions spend a fair amount of their own resources on need-based grants and price discounts—partly owing to the need to compete with low-cost public institutions. Even without federal intervention, therefore, subsidy policies in private higher education are already rather income sensitive. Federal aid directed to private colleges thus does two things. First, it federalizes some of the costs of aid policies that the colleges would, within the limits of their resources, undertake anyway. (This is clearest with the campus-based programs that pay money directly into schools' financial aid budgets, but it applies more indirectly to Pell as well.) Second, it probably increases the total resources going into need-based aid at private colleges and focuses more of them on higher need, lower income students than the colleges would themselves.[25] Some sense of the latter point can be gathered from Table 3, which shows the distribution of federal and other grant aid per student (averaged over aided and nonaided students) by income class of students' families in private higher education for several years. It is clear that the schools themselves tend to devote more resources to relatively low-need students, while federal aid tends to go to higher need types.[26]

Whether federal aid going to public institutions promotes distributive fairness depends on judgments about whether it is desirable to introduce some income sensitivity into the pattern of subsidies in that sector.[27] Whether federal contributions promote fairness in private higher education depends on judgments about whether the federal government should bear part of the costs of "choice"—of sharing with families and private colleges part of the burden of making these institutions available to needy students. It is important to stress that the federal government does not come anywhere near picking up all of these costs. In recent years, about 57% of Pell revenues have gone to public institutions, about 21% to proprietary vocational schools, and only about 23% to

[23] During the late 1970's, following the passage of the Middle Income Student Assistance Act, the Pell methodology was made less stringent in some respects than private methodologies, so some students who would not have qualified for aid from their schools may have received Pell grants. This pattern was quickly reversed in the 1980's.

[24] "Regressive" here is used in the sense of tax policy. A regressive tax policy increases taxes less than proportionately with income; a regressive subsidy policy reduces benefits less than proportionately with income.

[25] "Probably" because the actual effect depends on how colleges' own policies would be different if federal aid did not exist.

[26] It should be noted that these figures include non-need-based as well as need-based aid, and that "other" aid includes aid through state scholarship programs and other third parties as well as institution-based aid. Perhaps the schools would redistribute their own aid money down the income scale if the federal contribution were reduced? It is impossible to be sure, but there is no evidence that this has happened in recent years as the relative importance of federal grant aid has declined.

[27] This is put in a way that takes the existence of substantial operating subsidies in public higher education as given. Some observers would prefer to recast the financing of public higher education in order to make state subsidies income-sensitive, by changing the form of state support from operating subsidies to portable student aid. But this question is part of the larger agenda of how we finance higher education that I am trying to avoid.

Table 3

Grant Aid Per Student,* Private Institutions

Income			Year					
			1974	1976	1978	1980	1982	1984
$10K or less		Real Federal Grants	892.23	995.05	1,052.08	909.06	650.89	611.23
		Other Grants	507.64	776.62	929.53	763.30	729.29	778.67
$10K to $20K		Real Federal Grants	324.82	417.73	436.23	488.71	320.80	265.92
		Other Grants	438.00	790.97	955.77	786.56	748.97	818.77
$20K to $30K		Real Federal Grants	114.12	148.39	148.75	202.99	122.14	83.78
		Other Grants	214.00	605.93	763.69	627.51	598.50	642.84
$30K to $50K		Real Federal Grants	78.53	58.41	58.05	80.84	54.39	27.76
		Other Grants	146.60	276.28	399.15	351.55	327.78	391.83
$50K or more		Real Federal Grants	18.38	19.89	15.96	26.82	25.75	13.77
		Other Grants	48.24	97.77	124.55	157.18	154.21	227.32
ALL		Real Federal Grants	270.47	299.82	299.34	352.99	227.79	200.59
		Other Grants	304.30	545.41	667.65	582.07	537.93	603.90

Source: Calculated from CIRP, American Freshman Survey. Amounts and incomes in 1978 dollars. Real federal grants is sum of BEOG and SEOG. Other grants include state and external as well as institution-based grants. Data are for full-time resident students.

*Both aided and non-aided students.

non-profit private institutions. Campus-based funds are targeted more heavily at private institutions, which gather about 43% of them (College Board, 1986). This level of support, however, implies that these sources pay only about a third of the costs low-income students face at private institutions and around a quarter of the costs facing middle-income students at these institutions.[28] The issue, then, given actual and likely funding levels, is not whether the federal government should stand ready to underwrite the full costs of an expensive private higher education for needy students, but whether fairness is promoted if it picks up part of the burden of bridging the gap between public and private charges.

The major exception to the generalization that federal aid fits under the broad umbrella of "need-based aid" is the GSL program, which has at various times excepted all or some of its recipients from needs analysis and/or subjected them to a less stringent needs test than either the Pell methodology or the "uniform methodology" used to distribute most non-Pell grant aid.[29] In fact, the recent reauthorization of the Higher Education Act for the first time limits all provision of GSL's to students with demonstrated need. Part of the rationale for keeping GSL out of the needs analysis framework over the years has been that even students who are not "needy" may still need to borrow money to finance college expenses, and they will have trouble gaining access to credit markets for higher education loans if they lack suitable collateral. This group includes both middle-income students at relatively low-tuition public institutions and more affluent students at higher cost private

[28]See Miller and Hexter, 1985a and 1985b.

[29]Only in the years 1978–81 were subsidized GSL's freely available to all students, with no means test at all. Earlier, families had to have incomes below a specified ceiling to qualify for GSL subsidies. This tended to target the funds to lower and middle class students, but without the more systematic targeting provided by a full-fledged needs analysis.

colleges. The recent tightening of GSL eligibility rules has produced cries of "foul" from both groups, but especially from public college students, who until now have not had to meet a needs test at all if their family incomes were under $30,000.

Yet, GSL not only provides access to credit markets, it provides that access on fairly heavily *subsidized* terms. The actual subsidy a student receives depends on how long he or she goes to school and how long it takes to repay, as well as on fluctuations in market interest rates. But most estimates suggest that 30 to 50 percent of the real cost of a federal guaranteed loan is ultimately carried by the federal government. Although affluent students may need access to credit markets, it is hard to explain why they "need" such subsidies, at least if need is understood in anything like the way it is in the rest of the need-based aid system. The impulse to make credit for college widely available—an impulse motivated importantly by considerations of fairness—here runs smack into the fairness-inspired belief that subsidies should be targeted on students with demonstrated financial need. This conflict cannot be avoided as long as the two different goals of providing subsidies and providing access to credit are locked together in one program.

Microfairness. Albert Einstein, in a context far removed from higher education finance, said "God is in the details." The point may apply nonetheless. Details about exactly who qualifies for federal student aid, and how much, may be just as challenging to work out fairly as broader distributive questions—and, if handled poorly, they may be at least as threatening to the viability of the aid system.

Perhaps a useful way to think about the problem is this. There is a clear "core case" of a student from a needy family—an image we have in mind of the person need-based aid fundamentally aims to help. For most of us, the image is that of a struggling young person, born in or near poverty, whose parents would like to help her get through college, but really can't, at least not without tremendous sacrifice.

No doubt some people would deny that a person in this plight deserves federal subsidy, but not very many. Disagreements about federal aid arise mainly because any federal aid system needs to have a response to a variety of kinds of cases that deviate in one or another dimension from that "canonical" picture. How should we view the family that is not bad off in the long run, but is temporarily short of funds? Or the family with substantial net worth, but whose assets are tied up in a farm or a house? The family that could have saved, but did not? What is the responsibility of a noncustodial divorced parent? What about the increasing numbers of adult and part-time students? How should we treat the scion of the family, who at twenty-five is "independent" of his parents, but still expects to inherit?

It is important to see that, even for those who agree that the federal government has a basic responsibility to subsidize the education of needy students, these are intrinsically hard questions. It is impossible for any actually operating aid system to be silent about them, and our basic principles are not precise enough to guide us to unambiguously best answers about all of them. And even when we know what we would like to do—as perhaps with the "scion"—it may be impossible to write a set of rules which is manageable and still gives the outcome we want in every case.

All this is sure to become more difficult as the financial affairs of American families become more complex and as rising college costs make more affluent families eligible for need-based aid (even though relatively little of the aid they get may come from federal sources). As in the tax system, there is a real tension between simplicity and fairness—one needs the details to handle hard cases, yet getting the details may prove intrusive and oppressive. It is also true that, even more than the tax system, needs analysis systems depend on voluntary compliance; although some procedures exist for verifying aid applications, nothing at all comparable to the Internal Revenue Service's auditing and enforcement capacities exists or is imaginable for student aid.

There is a further complication. As the federal government has come to fund a larger fraction of all student aid, it has taken an increasingly aggressive stance toward dictating the needs analysis methodologies colleges and universities use in awarding some of that aid. Most recently, Congress has written into the law a methodology that schools must use in distributing *all* the aid going to a student who gets *any* federal aid. Such a congressionally legislated methodology is subject not only to all the technical problems mentioned above, but to enormous and fluctuating political pressures.

It is clear that the "microfairness" of the aid system is coming under increasing pressure. The system of need-based aid may well not survive unless procedures are found for developing and modifying the "rules of the game" in acceptable

ways. Two things seem to be missing right now. One is a scheme for distinguishing families with relatively simple financial circumstances and claims from those more complex cases that need a full-blown needs analysis. The other is a visibly impartial body that can oversee the details of needs analysis methodologies—a body that will be publicly accountable but insulated from the immediate political pressures and the enormous demands on timing facing members of Congress.

3. Institutions and student aid: the supply side

I mentioned at the outset that we cannot really assess the effectiveness of student aid without attention to its impact on how, and how well, institutions operate. This issue has been pushed into the headlines of late by the Secretary of Education's strong insistence that increasing student aid does not help needy students cope with college costs, because the main effect of aid is simply to cause schools to raise their prices. It would be remarkable if this story were true in its extreme form—that *all* federal aid is simply absorbed in aid-induced tuition increases—and we have seen no credible evidence to support it. But it would be just as remarkable if schools' decisions about pricing and the allocation of their own aid funds were entirely independent of federal student aid policy.

In fact, it is not impossible that aid and tuition are linked, but in just the opposite way from the Secretary's hypothesis. It is possible, that is, that *decreases* in federal student aid may *raise* the prices some schools charge. If schools feel obliged, either for competitive or humanitarian reasons, to replace lost federal aid for needy students, that revenue has to be made up from somewhere. And the revenue source most institutions (especially private institutions) have some control over is tuition. This would provide a link between tuition and aid exactly inverse to the one the Secretary has emphasized.

Indeed, the crude data we have offer more support for this hypothesis than the other. Schools have raised their institutional expenditures on student aid quite rapidly as federal support has fallen relative to costs. And tuitions have tended to go up more rapidly when federal aid is scarce or falling than in the 1970's, when it rose rapidly. Needless to say, this evidence is far from ironclad.[30]

It would, however, be a serious mistake to limit assessment of the institutional impact of aid to the narrow question of aid and pricing. Let me suggest the broader agenda by offering a few illustrative examples of important "supply-side issues."

1. Tom Mortensen, when he was with the Illinois State Scholarship Commission, offered the following assessment of developments in that state. When lower income Illinois students started receiving less federal grant assistance in the 1980's, the Scholarship Commission reacted by targeting more state student aid on lower income students. As a result, higher income students attending private institutions started receiving less (or no) state aid, and began applying in greater numbers to public four-year institutions. This excess demand from relatively well-qualified applicants helped induce the public institutions to raise their admission standards, a step that implied denying admission to larger numbers of low-income blacks, whose credentials tended to be relatively weak. If this analysis is correct, it suggests that cutbacks in federal student aid can affect the opportunities available to disadvantaged students through channels that have nothing to do with the standard "demand-side" story about changes in aid affecting those families' capacities to pay. Whether or not this can actually be shown to have occurred in Illinois, it is plain that indirect effects of this kind could develop at various points in the supply system.
2. The expansion of federal student aid has been accompanied by a remarkable increase in numbers of proprietary vocational institutions and in enrollments in that sector. Reliable data on this sector are hard to come by, but one piece of evidence is the growth in the share of Pell revenues going to students at proprietary institutions over time—from 9% in 1974–75 to over 20% in 1984–85 (Gillespie and Carlson, 1983; College Board, 1986). The cause and effect seem clear. Pell grants and student loans allow low-income students, many of whom are not qualified for or not interested in traditional higher education, to pay for vocational training. Small, entrepreneurial proprietary institutions, often operated as chains, have responded to this market with enormous energy, notably through aggressive advertising and through

[30]For further discussion see Hauptman and Hartle, 1987, and McPherson, 1988.

strong job placement efforts for their graduates. The lobbying presence of this sector in Washington has also become powerful.

The supply of this kind of education was in very substantial measure called into being by federal policy choices—although the development seems to have been thoroughly unanticipated. Indeed, serious efforts to measure enrollments and describe performance in this sector are only now getting under way. Congress is groping toward ways of regulating this sector it helped bring into being. It seems clear that the emergence of this sector is of first-rate importance for the educational future of American youth. It is a phenomenon that must be understood from the supply side.

3. A final illustration is the history of affirmative action toward minorities in U. S. higher education. It is clear that in the 1970's many colleges and universities in both public and private sectors became much more aggressive in pursuing affirmative action policies in student recruiting and admissions and in modifying their curricula to accommodate students with different needs and interests. To an important degree, these developments were products of the social consciousness of the time. But it is significant that need-based federal student aid reduced the cost to states and institutions of enrolling disadvantaged minority students, since part of the aid cost would be borne by the federal government. It was, in particular, less burdensome for states and localities to operate open admission community colleges after the federal government began picking up part of the tab. It seems very likely that federal student aid policy increased the supply of places for disadvantaged minorities in higher education and encouraged their recruitment, although we do not know how to measure the extent of this effect. It is also plausible that the reduced emphasis on aggressive recruiting of disadvantaged minority students at many institutions in the 1980's is related to changes in federal policy, although again the climate of the times also has much to do with it.

These examples illustrate the importance of improving our understanding of how federal aid policies influence institutional policies and behaviors. Comparatively speaking, we have lavished attention on the "demand-side" implications of student aid, through studies like those discussed in section 1 above, while hardly touching the supply side. It is as though studies of agricultural price supports never looked at the behavior of farmers, or studies of housing subsidies never looked at builders. To begin to fill this gap, we need to work on models of institutional behavior, encompassing state-run, independent nonprofit, and profit-seeking suppliers.[31] We also need to identify and work with sources of data in which there are significant variation in the variables affecting supply, so that impacts of changing supply conditions can be studied. We might, for example, investigate the comparative institutional behavior of schools in states with very different state student aid policies. The problems are not easy, but if we want a rounded picture of the effects of student aid they are extremely important.

What are the policy implications of introducing a supply-side perspective on student aid? Some of them obviously depend on empirically supported answers to questions such as those raised above. But some comments can be made at a more general level. It is, after all, plain that federal student aid has become a major source of institutional finance in the U. S.—schools do rely on aid as a means of "financing their budgets." Not all student aid, by any means, serves this purpose. It would be foolish to suppose that if the $20 billion dollars of federal aid disbursements suddenly dried up schools would be $20 billion dollars poorer. A substantial part of the loss—certainly the majority—would land on families who would be forced to come up with the money themselves or who would withdraw their children from higher education (suffering then an educational rather than a financial loss). But still the loss of that revenue flow would be a substantial blow to colleges and universities.

Federal student aid is then in part a way of giving federal aid to institutions.[32] We need to ask whether, from a policy point of view, this is a good thing. That is really a two-part question (1) Should the federal government provide some institutional support to colleges and universities? (2) If so, is student aid a good vehicle for providing such

[31] Such studies would connect with the literature on public choice and on the behavior of the not-for-profit sector more generally. See Hoenack and Pierro, 1986, and the essays in Rose-Ackerman, 1986.

[32] For a more complete discussion see McPherson, 1987.

support, compared to alternatives that are realistically available?

A full-dress treatment of these questions is not my purpose here. Instead, I want to urge that these questions—which received serious national attention in the late 1960's when the issue of federal support for higher education was being seriously debated—be put back on the agenda. We cannot say how well federal student aid is working without thinking these questions through.

One kind of answer to the first question is that the federal government should *not* be in the business of providing institutional support. Let states do that through state-run institutions (if at all); the federal government should simply purchase from universities those services it requires—notably research and the education of disadvantaged students. Any institutional support universities derive from these purchases is just an unavoidable byproduct of buying the services and should be minimized.

Taken to its extreme, this proposes a competitive market model of higher education, where schools derive their revenues from the sale of services to customers. If we accept that logic, it becomes doubtful that higher education institutions should be tax exempt or nonprofit, or indeed that states should run them. This market model has, of course, considerable appeal on grounds of economic efficiency. Perhaps the most cogent argument against it derives from the observation that for many hundreds of years, societies have chosen not to run academic institutions in that way. It has been seen as desirable to place some kind of buffer between the various demanders of services from universities and colleges and their internal operations, a buffer that has been supplied at times by a framework of religious insulation, at times by state support and protection. General institutional support provides universities with a base of resources that allows them at times to refuse to do what their clients want, and also to do things their clients will not pay for. Whether the combination of state institutional support for public colleges and charitable support (encouraged by favorable tax treatment) for private institutions does enough to provide this buffer, or whether additional direct federal support is called for, is hard to judge, but there is considerable reason to resist the presumption that a pure "purchase of services" approach is ideal.

If one reaches the conclusion that federal institutional support is justified, there remains the question whether federal student aid is a good way to provide it. The most obvious alternative is direct formula-based institutional aid, which would go to schools in proportion to their enrollments, or the number of degrees they grant, or some more complicated scheme. Congress looked hard at such schemes in 1971 and 1972, and finally drew back. The short-run political problem was to find a formula that would not be seen as biased against some particular sort of school; any given formula would be seen as over-weighting or under-weighting graduate students, as allowing too much or too little for differences in educational costs, and so on. In the longer run, the danger in any formula is its rigidity. The political problem of revising any formula once in place (except in ways that gave everybody more—and even then how much more is a problem) would be overwhelming. Moreover, any politically viable formula would be inclined to reinforce the status quo—tending to finance exactly the pattern of institutions that then existed and tending to disadvantage institutions that differed from existing norms.[33] States that operate institutions have more control in this respect; they can, at least in principle, gather the detailed knowledge needed to reallocate subsidies in response to changing conditions—although they plainly do not find it all that easy to do so. For the federal government to do the same for thousands of institutions is unimaginable.

Student aid as institutional aid has some advantages. It gives institutions an incentive to attract and to respond to the requirements of disadvantaged students. It has some built-in flexibility, because funds will flow toward institutions and sectors that expand and away from those that contract. It avoids the need for an explicit federal judgment about how much institutional support any particular institution or type of institution should get.

There are disadvantages, too. For much the same reasons that formulas for direct institutional aid would be hard to revise, the complex of institutional interests that impinge on aid distributions—encompassing not only schools of various descriptions, but banks, loan guarantee agencies, forms processors, needs-analysis services, and so on—make those formulas hard to revise as well. This is one reason that the existing set of aid programs has become so bewilderingly complex: when somebody has a stake in every existing pro-

[33] There is an excellent discussion in U. S. Department of Health, Education, and Welfare, 1969.

vision, the number of provisions is almost certain to rise over time. The student aid "vehicle" may deliver large amounts of resources to types of institutions where Congress is not eager to see them go, yet there is no convenient way to regulate the mechanism. Finally, reliance on the student aid vehicle for delivering institutional aid causes arguments about student needs and institutional needs to become thoroughly blended together, promoting incoherent discussion of public policy.

Ultimately, if federal institutional support for higher education is judged worthwhile, the question about student aid as a vehicle for delivering it must be put in comparative terms. What feasible alternative would work better? If the nation were to cut back sharply on federal aid without putting such an alternative in place, the overall level of federal support for higher education institutions would drop substantially. Perhaps that would be judged a desirable outcome; it is not something we should do by accident.

4. Conclusion

I have identified three broad points of view from which to evaluate the effectiveness of federal student aid: those of promoting wider opportunity for postsecondary education, of distributing the burden of college costs fairly, and of contributing to the general institutional health of colleges and universities. It is natural to conclude by asking about the relationships among those goals—are they compatible or conflicting?

It is clear that any one of these goals, pursued single-mindedly, could conflict with the others.[34] For example, exclusive concern with promoting opportunity would imply denying aid to any family that would somehow scrape the resources together without aid. But this would deny aid to just those poor families who were willing to make heroic sacrifices to pay for higher education, and that seems plainly unfair. Similarly, if all one cared about were promoting the financial well-being of institutions, one would want to detach aid expenditures thoroughly from any encouragement to institutions to enroll more needy students. The way to maximize the contribution of federal subsidies to the institutions' financial health is to give them money for doing exactly what they would do anyway, so that all the federal revenue is "gravy." The effort to enroll more needy students will absorb some of those revenues the schools would get to keep if aid were provided to schools with "no strings attached."

Yet, despite these areas of conflict, the three goals may well be compatible to a striking degree. Consider the relationship between fairness and opportunity. Most people would agree that a fair structure of student aid would give more aid to needier families, a feature that tends to promote greater enrollment of disadvantaged students and hence more equal opportunity. It is, of course, the case that some arguments made in the name of fairness cut the other way, as when middle-class or part-time or adult students argue for "equal" treatment with low-income young people, and interpret "equal treatment" as meaning they should receive generous aid. But the appeal to fairness here may be superficial: it is not really fair to treat people the same if their circumstances are different. The standard of fairness calls for working these kinds of cases through carefully, paying attention to differences in need and capacity to pay. Given scarce aid resources, fairness arguments will probably often support opportunity arguments for targeting resources on the needier students.

It is perhaps more surprising to note that "institutional support" arguments often reinforce "opportunity" and "fairness" arguments. Student aid helps an institution when it enables more qualified students to go or when it relieves the institution-based aid budget for students who would receive aid from the school if federal aid were not available. Aid does not help a school when it simply picks up expenses the family would otherwise have paid themselves—in that case it is the family budget rather than the institution's budget that benefits from the aid. But, in general, money that goes to needier students is more likely to affect their enrollment decisions and/or to affect institution-based aid allocations. It is when money goes to families who can afford to pay the full bill at the college of their choice that it helps the institution least.[35] Thus, in a broad way, if student financial aid is to help institutions, it is better that it be targeted on needier students, as both fairness and opportunity arguments urge.

These broad points about compatibility and conflict among goals plainly leave a lot of room for

[34] It is not so clear that "fairness" pursued single-mindedly would conflict with other goals, but then it is not so clear what single-minded pursuit of fairness would mean: fairness is perhaps better viewed as a constraint on the pursuit of other goals.

[35] For further discussion see McPherson, 1987.

further investigation and discussion. They do not settle questions, for example, about proper targeting on public versus private institutions, about the right treatment of independent students from these several points of view, or about how rapidly aid should fall with rising income.

But it was never my intention to settle such questions here; rather I hope that I have raised them in a more illuminating way.

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